



PROJECT 1 : Designing a City of the Future

Student Planning Sheet: Lesson 3

Create Efficient, Healthy, Resilient Cities

Name:

Date:

Directions: Alone or with a group, complete this worksheet using information found in [Grand Challenge 4](#). Save the information gathered around benefits and problems found in cities along with lists of characteristics that make an efficient, healthy and resilient city listed with this worksheet as you plan out your design for a city of the future.

OVERVIEW

The future is increasingly urban. Cities will absorb almost all of the world’s projected population growth in the next three decades. By 2050 cities will be home to over 2 billion more people than today. How will environmental engineers, city planners and others create cities that are efficient, healthy and resilient? What issues will they face with these larger, more populated cities? In the Environmental Engineering for the 21st Century study, [Grand Challenge 4](#) explores ways to “Create Efficient, Healthy, Resilient Cities”.

1. By 2050 cities will be home to over 2 billion more people than today. Why do people want to live in cities? What do cities offer that rural communities lack? What are some of the problems found in cities? Why are cities prone to those issues?

Create a list of benefits and problems found in cities:

Benefits:	Problems:



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2. Although cities occupy only 3% of Earth's ice-free landmass, they produce 50% of waste and 60 to 80% of global gas emissions and are responsible for 60 to 80% of energy use and 75% of all natural resource use.

Reflecting on your benefits and problems list above, create a list of the characteristics of a healthy, efficient and resilient city. What types of resources should cities support in order to promote a high quality of life for ALL of their residents?

List of Characteristics:
